

REMARKS

The Examiner is thanked for the allowable subject matter of Claims 33-39, 42 and 43.

The Examiner has rejected Claims 28-32, 40, and 41 under 35 U.S.C. 103(a) as being unpatentable over Bottoms, Jr. et al. (U.S. Patent No. 5,274,725), in view of Szum (U.S. Patent No. 6,240,230). Applicant respectfully disagrees with such rejection, especially in view of the amendments made hereinabove to the independent claims.

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed.Cir.1991).

With respect to the first element of the *prima facie* case of obviousness and, in particular, the obviousness of combining the Bottoms, Jr. and Szum references, the Examiner argues that it would have been obvious to "provide the first transmitting portion of Bottoms, Jr. et al. with 12, 18 or 24 transmitting members arranged in 4 or 5 rows having 2, 3, 4 & 3, or 2, 4, 5, 4 & 3, or 4, 5, 6, 5, & 4 configuration to increase the transmission capacity of the cable since it has been held that merely duplicating the essential working parts of a device involves only routine skill in the art." To the contrary, applicant respectfully asserts that it would not have been obvious to combine the teachings of the Bottoms, Jr. and Szum references, especially in view of the vast evidence to the contrary.

For example, applicant respectfully asserts that a person skilled in the art, seeking to reduce an amount of reinforcement necessary for the optical fibers of Bottoms, Jr., while avoiding damage to the optical fibers, would fail to find disclosure or suggestion in Szum as to how the problem could be solved. Therefore, applicant respectfully asserts that it would not be obvious to combine the teachings of Bottoms, Jr. and Szum since they would be unsatisfactory for applicant's claimed "signal transmitting cable for installation into a tube by means of blowing by compressed fluid," as claimed. If proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984)

Applicant respectfully asserts that at least the first element of the *prima facie* case of obviousness has not been met, since it would be *unobvious* to combine the references, as noted above. Nevertheless, despite such paramount deficiencies and in the spirit of expediting the prosecution of the present application, applicant has amended the independent claims to further distinguish applicant's claim language from the Bottoms, Jr. and Szum reference, as follows:

"signal transmitting cable for installation into a tube by means of blowing by compressed fluid, the cable comprising a first signal transmitting portion including a plurality of elongate, flexible first optical signal transmitting members, wherein the first optical signal transmitting members of the first signal transmitting portion are surrounded by a first layer of resin material curable by means of radiation such that only the outermost optical signal transmitting members are in contact with said first layer, and said first optical signal transmitting members are arranged to form at least three rows, wherein for each said row containing a plurality of said members, said members are arranged such that neighbouring members of said row are in touching contact with each other, each recess formed by neighbouring members of a first said row facing towards a second said row accommodates a respective member of said second row, and said first layer is in touching contact with substantially all of the outward facing surface of the first signal transmitting portion." (see independent Claim 1).

“arranging a plurality of elongate, flexible first optical signal transmitting members in at least three rows, wherein for each said row containing a plurality of said members, said members are arranged such that neighbouring members of a row are in touching contact with each other, and each recess formed by neighbouring members of a first said row facing towards a second said row accommodates a respective member of a said second row;

surrounding said first optical signal transmitting members by a first layer of resin material curable by means of radiation such that only the outermost optical signal transmitting layers are in contact with said first layer, and said first layer is in touching contact with substantially all of the outward facing surface of the first signal transmitting portion; and

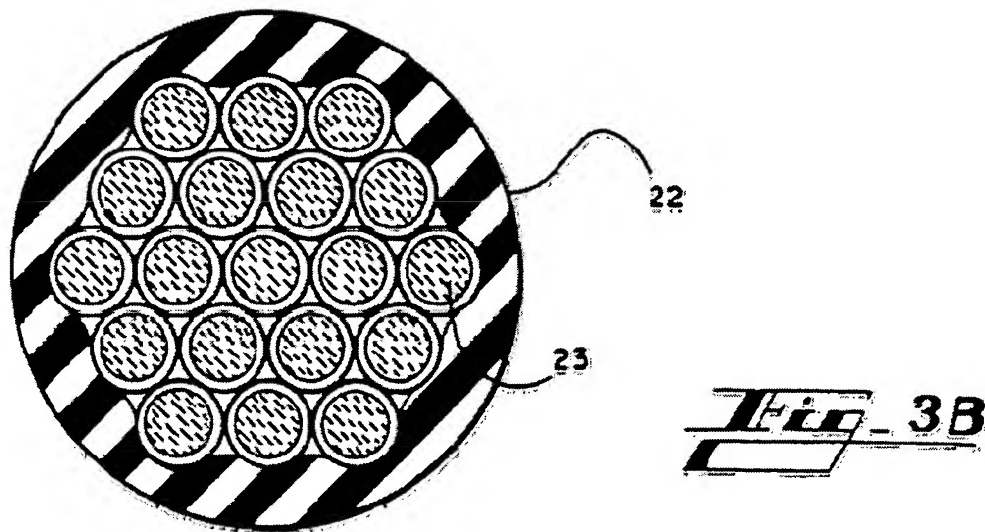
curing said first layer by means of radiation” (see independent Claim 41).

Applicant respectfully asserts that Bottoms, Jr. teaches “an improved fiber optic groundwire cable that functions as both a groundwire and a telecommunications cable” (Col. 3, lines 50-52). However, applicant respectfully asserts that the arrangement, as taught in Bottoms, Jr., would be unsuitable for installation into a tube by means of blowing by a compressed liquid, in the manner applicant claims (see Claim 1). For example, Bottoms, Jr. teaches “[a] fiber optic groundwire or static cable for use between spaced-apart support towers of an electrical power transmission network” (Abstract) and “a ground fault protection cable that functions as both a groundwire and a fiber optic telecommunications cable used with overhead electrical power transmission lines suspended between spaced-apart support towers or pylons” (Col. 1, lines 15-21). However, applicant respectfully asserts that the distances between the spaced-apart support towers or pylons would be too large to make installation of the cable into a duct a cost effective option.

Furthermore, applicant respectfully asserts that Bottoms, Jr. teaches that “the preferred fiber optic groundwire 10 includes a core conductor 20 that contains at least one helically-wound grooved channel 21” and that “the core conductor 20 contains two

grooved channels 21” (Col. 7, lines 20-24 – emphasis added). In addition, Bottoms, Jr. teaches that “[a]t least one layer of stranded electrical conductors or strength members 25 completely encloses the core conductor 20 and thereby also completely covers each jacketed fiber optic bundles 23 tightly mounted within each channel 21” (Col. 7, lines 31-35 – emphasis added) and that “the core conductor 20 comprises a continuous channeled solid aluminum or aluminum alloy rod that provides resistance to radial compressive forces and flattening” (Col. 7, lines 36-40 – emphasis added). However, applicant respectfully asserts that the weight of the core conductor 20, which is comprised of a continuous channeled solid aluminum or aluminum alloy rod, and the strength members 25, which completely enclose the core conductor 20, as in Bottoms, Jr., would simply be too heavy to enable “installation [of a signal transmitting cable] into a tube by means of blowing by compressed fluid,” as claimed in Claim 1.

In addition, applicant respectfully asserts that Figure 3B of Bottoms, Jr. fails to suggest applicant’s claimed technique.



Applicant respectfully asserts that Bottoms, Jr. clearly illustrates with respect to Figure 3B that “[t]he strain jacket 22 tightly binds a plurality of optical fibers that form a bundle of optical fibers 23” (Col. 8, lines 40-41 – emphasis added) and that “[t]he preferred strain jacket is extruded around the bundle of optical fibers 23 at a relatively

high temperature and assumes a shrink fit around the bundle upon cooling to ambient temperature.” (Col. 9, lines 36-39 – emphasis added). However, as illustrated in Figure 3B, the strain jacket 22 which binds the bundle of optical fibers 23 and assumes a shrink fit around the bundle, as in Bottoms, Jr., fails to suggest that “the first optical signal transmitting members of the first signal transmitting portion are surrounded by a first layer of resin material... such that only the outermost optical signal transmitting members are in contact with said first layer... and said first layer is in touching contact with substantially all of the outward facing surface of the first signal transmitting portion” (emphasis added), as claimed in Claims 1 and 41. Clearly, the gaps between the surface of strain jacket 22 and the bundle of optical fibers 23, as illustrated in Bottoms, Jr., simply fails to even suggest that “said first layer is in touching contact with substantially all of the outward facing surface of the first signal transmitting portion” (emphasis added), as claimed in Claims 1 and 41.

Additionally, applicant respectfully asserts that Bottoms, Jr. teaches that “[t]he strain jacket 22 is preferably a pliable, thermally insulating, weather-resistant, and temperature-resistant material such as a silicone-based material (for example silicone rubber) or an ethylene propylene-based material (for example ethylene propylene dimethyl) which can resist temperatures up to about 300° C” (Col. 9, lines 39-45). Applicant respectfully asserts that due to the fluid drag and friction properties of the strain jacket 22 around the bundle of optical fibers 23, as in Bottoms, Jr., would be completely unsuitable for “installation [of a signal transmitting cable] into a tube by means of blowing by compressed fluid,” as claimed in Claim 1. Clearly, the strain jacket 22 encasing a bundle of optical fibers 23, as in Bottoms, Jr., would be completely unsuitable “installation [of a signal transmitting cable] into a tube by means of blowing by compressed fluid,” as claimed in Claim 1.

Furthermore, applicant respectfully asserts that applicant’s claimed techniques are advantageous over the teachings of Bottoms, Jr. since applicant claims “[a] signal transmitting cable for installation into a tube by means of blowing by compressed fluid,” as claimed in Claim 1, which may avoid damage to the “optical signal transmitting

members,” as claimed, and require less reinforcement of the “optical signal transmitting members,” as claimed, just by way of example.

Applicant respectfully asserts that at least the first and third elements of the *prima facie* case of obviousness have not been met, since it would be *unobvious* to combine the references, as noted above, and the prior art excerpts, as relied upon by the Examiner, fail to teach or suggest all of the claim limitations, as noted above. Thus, a notice of allowance or specific prior art showing of each of the foregoing claim elements, in combination with the remaining claimed features, is respectfully requested.

To this end, all of the independent claims are deemed allowable. Moreover, the remaining dependent claims are further deemed allowable, in view of their dependence on such independent claims.

In the event a telephone conversation would expedite the prosecution of this application, the Examiner may reach the undersigned at (408) 505-5100. The Commissioner is authorized to charge any additional fees or credit any overpayment to Deposit Account No. 50-1351 (Order No. UDL1P017).

Respectfully submitted,
Zilka-Kotab, PC

/KEVINZILKA/

Kevin J. Zilka
Registration No. 41,429

P.O. Box 721120
San Jose, CA 95172-1120
408-505-5100